III. *Remarks on* Boehmeria nivea (Urtica nivea of *Linnæus*). By Mr Sadler.

Mr Sadler exhibited raw and prepared fibres of Boehmeria, as well as articles of dress manufactured from it, and drawings and specimens of the plant. He stated that it was a plant which was attracting a good deal of attention at the present moment, both in this country and abroad, from the fact that the Government had lately offered an award of L.5000 for the invention of a machine capable of separating the fibre from the bark and stem in an inexpensive manner; the working expenses of the prepared fibre not to exceed L.15 per ton, and to be of such quality as to realise not less than L.50 per ton in the English market. The offer of this premium was issued from the India Office in February last, and one year given to competitors; but Mr S. saw in the newspapers about three weeks ago that a gentleman in Bombay was stated to have invented a machine such as was required. This statement, even if verified, should not however have the effect of preventing intending competitors from sending in their inventions.

Mr Sadler went on to describe *Boehmeria nivea* as a herbaceous plant, belonging to the natural order Urticaceæ, and indigenous to South-Eastern Asia. He referred to the other fibre-yielding plants belonging to the same natural order, and exhibited a scarf manufactured from the fibre of the common nettle (*Urtica dioica*), which he described as a fine and soft, but not lasting fibre. The Boehmeria is known as "Rheea," "Ramie," "Ma," or "Chu-ma," "Chinese grass," and "Chinese nettle." Several notices of the plant have recently appeared, and Mr Sadler particularly noticed a paper by George King, M.B., published in the "Journal of the Agricultural and Horticultural Society of India," vol. i., part 4, and a full description of the plant, and mode of preparing its fibre, as given by Dr Royle in his "Fibrous Plants of India." Dr King states that naturally twice, but under cultivation three, four, or even five times a year, according to climate and soil, a fresh set of stems shoots up from the root. The proper time to cut the old twigs for their fibre is when they begin

to become brown at their bases. In the Government Gardens at Deyrah Dhoon, where the object aimed at has been the propagation of the plant, and not the extraction of its fibre, the stems have hitherto been cut down only twice a year. If, however, it was well watered and manured, three crops (as is the case in China) might be obtained. In the moist climate of Assam four or five crops may be secured. The plant is hardy, and thrives well in parts of India differing much in climate and other physical conditions, such as Assam, Bengal, the North-West Provinces, and the Kangra valley in the Punjab. It has also been introduced with success in the Madras Presidency. In Deyrah Dhoon some old plants throw up shoots from 8 to 10 feet high, 6 feet being the common height. An 8-feet shoot, if carefully manipulated, will yield a fibre 6 feet long.

Dr King next notices the limit of its growth, and the soil and climate best suited for it. In speaking of its propagation and cultivation, he states that the plant is monœcious, and that seed is uncertain in localities where the insects are not indigenous by which fecundation is probably for the most part accomplished. In districts where Boehmeria has been introduced, propagation has therefore been conducted not by seed, but by cuttings, and by the division of the roots of old plants. Scarcely one of the cuttings ever fails to strike. The cost of cultivation, and the probable produce per acre, are next considered by the author. Major Hannay estimates the expense at L.14 per ton, and reports that Rheea can be produced and sold with profit at as cheap a rate as Russian hemp. Dr Royle, however, states that this must be a mistake, and that L.28 were meant. Captain Jenkins puts down the cost at L.28 per ton, while Captain Dalton states that the lowest price at which it is likely to be procurable by purchase from the cultivator is 6 annas a seer, or about L.48 per ton. Dr King notices further the process of separating the fibre from the plant, and its cleaning and bleaching, and concludes by relating some experiments which have been made in the manufacture of the fibre, and points out the chances of its success in a commercial point of view.